



## General

### Guideline Title

Work-related acute cauda equina syndrome (CES) diagnosis and treatment.

### Bibliographic Source(s)

Washington State Department of Labor and Industries. Work-related acute cauda equina syndrome (CES) diagnosis and treatment. Olympia (WA): Washington State Department of Labor and Industries; 2014 Apr 26. 5 p. [12 references]

### Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Washington State Department of Labor Industries. Work-related acute cauda equina syndrome (CES) diagnosis and treatment. Olympia (WA): Washington State Department of Labor and Industries; 2009 Aug 1. 5 p. [11 references]

## Recommendations

### Major Recommendations

Review Criteria for the Diagnosis and Treatment of Acute Cauda Equina Syndrome (CES)

A request may be appropriate for	If the patient has	AND the diagnosis is supported by these clinical findings			AND this has been done (if recommended)
<i>Surgical Procedure</i>	<i>Diagnosis</i>	<i>Subjective</i>	<i>Objective</i>	<i>Imaging</i>	
Lumbar decompression	Cauda equina syndrome	Partial or complete loss of bladder and/or bowel function (incontinence or retention not otherwise explained)	Diminished or absent anal sphincter tone	A lesion with mass effect on the cauda equina is present in the spinal canal, compressing multiple lumbo-sacral nerve roots (usually large mass effect) as documented by:	Conservative care alone is rarely indicated
		AND/OR	Saddle anesthesia		
		Acute low back pain	AND/OR		
				Lumbar magnetic resonance imaging (MRI) (the diagnostic procedure of choice)	

A request may be appropriate for	If the patient has	AND the diagnosis is supported by these clinical findings AND/OR	OR	AND this has been done (if recommended)
		Bilateral/unilateral sciatica  AND/OR  Sexual dysfunction	Numbness and/or weakness involving both legs or multiple nerve roots in one leg is present  AND/OR  Urinary retention, incontinence, and/or patulous anus  AND/OR  Reduced or absent bulbo cavernosus reflex  AND/OR  Gait disturbances	Computed tomography (CT) or CT myelography may provide useful information, especially when MRI cannot be done or is limited by hardware artifact

## Clinical Algorithm(s)

None provided

## Scope

## Disease/Condition(s)

Acute cauda equina syndrome

## Guideline Category

Diagnosis

Evaluation

Treatment

## Clinical Specialty

Emergency Medicine

Neurological Surgery

Neurology

Orthopedic Surgery

## Intended Users

Advanced Practice Nurses

Health Care Providers

Health Plans

Managed Care Organizations

Nurses

Physician Assistants

Physicians

Utilization Management

## Guideline Objective(s)

- To provide an educational resource for physicians who treat injured workers in the Washington workers' compensation system under Title 51 Revised Code of Washington (RCW) and review criteria for the Department's utilization review team to help ensure diagnosis and treatment of cauda equina syndrome is of the highest quality
- To provide standards that ensure a uniformly high quality of care for injured workers in Washington State
- To summarize information from the available medical literature and expert clinical opinion to help physicians make an accurate diagnosis quickly and deliver the appropriate care as soon as possible

## Target Population

The injured worker with cauda equina syndrome

## Interventions and Practices Considered

### Diagnosis/Evaluation

1. Evaluation of subjective (sensory symptoms) and objective (neurological deficits) clinical findings
2. Diagnostic tests, including magnetic resonance imaging (MRI), computed tomography (CT) scan or CT myelography, x-rays, ultrasound, or urodynamic tests

### Treatment

1. Conservative treatment (not generally recommended)
2. Decompression surgery (e.g., micro discectomy, wide laminectomy with discectomy)

## Major Outcomes Considered

- Incidence of work-related cauda equina syndrome (CES)
- Appropriate authorization of CES surgeries by the utilization review team and claim adjudicators
- Incidence of CES by cause (disc herniation, trauma, etc.)
- Degree of recovery following treatment

## Methodology

### Methods Used to Collect/Select the Evidence

## Description of Methods Used to Collect/Select the Evidence

The literature search was conducted in February and March of 2014. PubMed was the main database searched for peer reviewed articles. The search terms used in PubMed were: *cauda equina syndrome*, *cauda equina syndrome and treatment*, *cauda equina syndrome and diagnosis*, *cauda equina syndrome and evidence-based medicine*. The search was filtered to select English language and humans, in the past five years. The studies reviewed were case articles, case reports, and case series studies (of class III/IV evidence). Cauda equina syndrome is not appropriate for randomized controlled studies.

Filters: 5 years, abstract available, English and humans

## Number of Source Documents

Search Date	Search Term	Results	*Selected Based on Title
02/20/2014	Cauda Equina Syndrome	281	20
02/21/2014	Cauda Equina Syndrome and treatment	222	19
02/24/2014	Cauda Equina Syndrome and diagnosis	179	36
02/24/2014	Cauda Equina Syndrome and evidence based medicine	111	17

\*Some of these articles overlapped.

## Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

## Rating Scheme for the Strength of the Evidence

The quality and strength of the evidence were assessed using the American Academy of Neurology (AAN) clinical guideline process manual rating scheme. More information about the Industrial Insurance Medical Advisory Committee (IIMAC) guideline process is included in a separate document (see the "Availability of Companion Documents" field). Refer to the [AAN Clinical Practice Guideline Process Manual](#)

## Methods Used to Analyze the Evidence

Systematic Review

## Description of the Methods Used to Analyze the Evidence

Not stated

## Methods Used to Formulate the Recommendations

Expert Consensus

## Description of Methods Used to Formulate the Recommendations

The process for guideline development is contained in a separate document, titled Medical Treatment Guidelines in Washington Workers' Compensation, June 2010 (see the "Availability of Companion Documents" field). A formal subcommittee was not convened for this review of the carpal tunnel syndrome guideline. The review was conducted by Washington State Department of Labor and Industries (L&I) staff, and discussed with the Industrial Insurance Medical Advisory Committee (IIMAC) members who worked on the previous guideline, then discussed and voted on in a meeting of the full IIMAC on April 25, 2014.

## Rating Scheme for the Strength of the Recommendations

Not applicable

## Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

## Method of Guideline Validation

External Peer Review

Internal Peer Review

## Description of Method of Guideline Validation

This guideline was carefully reviewed by Labor & Industries' epidemiology and health policy staff, and then by the Industrial Insurance Medical Advisory Committee (IIMAC), which included the main author of the previous acute cauda equina syndrome (CES) guideline.

## Evidence Supporting the Recommendations

### Type of Evidence Supporting the Recommendations

The type of supporting evidence is not specifically stated for each recommendation.

This guideline was based on the weight of the best available clinical and scientific evidence from a systematic review of the literature and on a consensus of expert opinion. Due to the emergent nature of acute cauda equina syndrome (CES), controlled studies are not feasible and the literature is limited to case series, case studies and narrative reviews.

## Benefits/Harms of Implementing the Guideline Recommendations

### Potential Benefits

Appropriate diagnosis and treatment of work-related acute cauda equina syndrome (CES)

### Potential Harms

Not stated

# Qualifying Statements

## Qualifying Statements

This guideline is intended as an educational resource for physicians who treat injured workers in the Washington workers' compensation system under Title 51 Revised Code of Washington (RCW). The guideline serves as a review criteria for the Department's utilization review team to help ensure diagnosis and treatment of cauda equina syndrome is of the highest quality. The emphasis is on accurate diagnosis and treatment that is curative or rehabilitative.

## Implementation of the Guideline

### Description of Implementation Strategy

Most guidelines are implemented within the utilization review (UR) program. Labor and Industries (L&I) guidelines have priority over other proprietary guidelines and criteria that may exist. Where L&I guidelines are not available, proprietary ones may be used. Reviewers apply each guideline as a standard for the majority of requests in the Washington workers' compensation program. For the minority of workers who appear to fall outside of the guideline and whose complexity of clinical findings exceeds the specificity of the guideline, further review by a physician is conducted.

When a surgical procedure is requested for a patient who meets the guideline criteria, the reviewer will recommend approval to the claim manager. If the criteria are not met, the request will be referred to a physician consultant who will review the patient's file, offer to discuss the case with the requesting physician, and make a recommendation to the claim manager. The flexibility built into this decision-making process helps legitimize the work of the subcommittee in the eyes of practicing physicians in Washington.

Completed guidelines will be communicated to practicing physicians via L&I's website and through its [provider listserv](#) . Education and training will be provided to reviewers and staff to ensure their proper application within the UR program. Where possible, continuing medical education (CME) credits may be offered.

## Institute of Medicine (IOM) National Healthcare Quality Report Categories

### IOM Care Need

Getting Better

### IOM Domain

Effectiveness

Timeliness

## Identifying Information and Availability

### Bibliographic Source(s)

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## Adaptation

Not applicable: The guideline was not adapted from another source.

## Date Released

1991 Jan (revised 2014 Apr 26)

## Guideline Developer(s)

Washington State Department of Labor and Industries - State/Local Government Agency [U.S.]

## Source(s) of Funding

Washington State Department of Labor and Industries (L&I)

## Guideline Committee

Washington State Department of Labor and Industries (L&I), Industrial Insurance Medical Advisory Committee (IIMAC)

## Composition of Group That Authored the Guideline

Not stated

## Financial Disclosures/Conflicts of Interest

Not stated

## Guideline Status

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## Guideline Availability

Electronic copies: Available from the [Washington State Department of Labor and Industries Web site](#) .

## Availability of Companion Documents

The following is available:

- Medical treatment guidelines for Washington Workers' Compensation. Washington State Department of Labor and Industries. Guideline process. 2010 Jun. 4 p. Electronic copies: Available from the [Washington State Department of Labor and Industries Web site](#)

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## Patient Resources

None available

## NGC Status

This summary was completed by ECRI on February 14, 2000. It was sent to the guideline developer for review on February 15, 2000; however, to date, no comments have been received. The guideline developer has given NGC permission to publish the NGC summary. This summary was updated by ECRI on May 27, 2004. The information was verified by the guideline developer on June 14, 2004. This summary was updated by ECRI Institute on November 16, 2009. The information was verified by the guideline developer on December 16, 2009. This summary was updated by ECRI Institute on July 15, 2014.

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